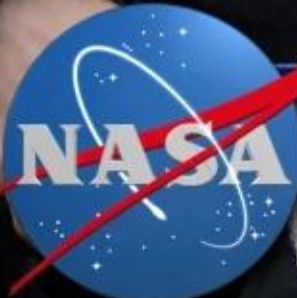




S. KELLY  
С. КЕЛЛИ



SPACESTATION  
LIVE

1  
00:00:09,270 --> 00:00:07,430  
scott kelly may be back on earth but

2  
00:00:11,270 --> 00:00:09,280  
when it comes to research his work is

3  
00:00:13,270 --> 00:00:11,280  
not done i recently spoke with a

4  
00:00:15,030 --> 00:00:13,280  
principal investigator of the field test

5  
00:00:16,790 --> 00:00:15,040  
study now that's some of the first tasks

6  
00:00:18,870 --> 00:00:16,800  
that scott had to accomplish after he

7  
00:00:20,310 --> 00:00:18,880  
landed now this particular study looks

8  
00:00:22,150 --> 00:00:20,320  
at the vestibular system and whether

9  
00:00:24,230 --> 00:00:22,160  
return to gravity affects things like

10  
00:00:26,470 --> 00:00:24,240  
walking a straight line or standing from

11  
00:00:28,870 --> 00:00:26,480  
a seated position the task may seem

12  
00:00:31,269 --> 00:00:28,880  
simple but it's research that has stood

13  
00:00:34,870 --> 00:00:31,279

the test of time

14

00:00:36,790 --> 00:00:34,880

one constant has been that

15

00:00:39,590 --> 00:00:36,800

the balance system

16

00:00:41,990 --> 00:00:39,600

primarily regulated by the vestibular

17

00:00:44,549 --> 00:00:42,000

system in the inner ear and its control

18

00:00:48,069 --> 00:00:44,559

of the postural muscles in your legs

19

00:00:49,270 --> 00:00:48,079

has always been affected by space flight

20

00:00:52,709 --> 00:00:49,280

and

21

00:00:55,110 --> 00:00:52,719

pinpointing exactly what the cause of

22

00:00:57,510 --> 00:00:55,120

that is still an ongoing

23

00:00:59,270 --> 00:00:57,520

investigation

24

00:01:01,750 --> 00:00:59,280

is that part of your field test and

25

00:01:03,029 --> 00:01:01,760

that's definitely part of the field test

26

00:01:04,950 --> 00:01:03,039

the field test

27

00:01:07,510 --> 00:01:04,960

by the way we just finished what was

28

00:01:09,990 --> 00:01:07,520

called the pilot field test and it moved

29

00:01:12,310 --> 00:01:10,000

into the era where we're doing the full

30

00:01:15,190 --> 00:01:12,320

field test which includes a lot more

31

00:01:17,190 --> 00:01:15,200

objectives than the the pilot probably

32

00:01:18,630 --> 00:01:17,200

was just to see if we could actually do

33

00:01:21,350 --> 00:01:18,640

this in the field

34

00:01:22,710 --> 00:01:21,360

somebody sent somebody out there on a

35

00:01:23,830 --> 00:01:22,720

helicopter

36

00:01:26,310 --> 00:01:23,840

with

37

00:01:28,630 --> 00:01:26,320

70 to 80 pounds on their back of the

38

00:01:31,030 --> 00:01:28,640

hardware and set up quickly and make the

39

00:01:32,310 --> 00:01:31,040

measurements that were necessary

40

00:01:35,590 --> 00:01:32,320

and

41

00:01:37,350 --> 00:01:35,600

so now we're doing more objectives

42

00:01:38,630 --> 00:01:37,360

and almost

43

00:01:41,910 --> 00:01:38,640

all of them

44

00:01:44,230 --> 00:01:41,920

are related or can be related to

45

00:01:45,670 --> 00:01:44,240

postural ataxia

46

00:01:46,710 --> 00:01:45,680

what kind of things do we do in this

47

00:01:49,749 --> 00:01:46,720

test

48

00:01:54,149 --> 00:01:49,759

well we're doing several things one is

49

00:01:56,870 --> 00:01:54,159

an activity that you you tried okay

50

00:01:59,030 --> 00:01:56,880

we do simple things initially

51  
00:02:01,350 --> 00:01:59,040  
uh like standing up from a chair and

52  
00:02:03,990 --> 00:02:01,360  
people wonder why would you do that

53  
00:02:06,149 --> 00:02:04,000  
that's a relatively simple thing well

54  
00:02:07,670 --> 00:02:06,159  
returning crew members particularly ones

55  
00:02:08,550 --> 00:02:07,680  
that have been up there six months or

56  
00:02:10,710 --> 00:02:08,560  
more

57  
00:02:13,510 --> 00:02:10,720  
get up from a chair differently than

58  
00:02:15,430 --> 00:02:13,520  
normal people do they they look

59  
00:02:18,390 --> 00:02:15,440  
look more like people that need

60  
00:02:20,470 --> 00:02:18,400  
assistance with everyday living

61  
00:02:22,710 --> 00:02:20,480  
and we ask them to

62  
00:02:25,670 --> 00:02:22,720  
lay on the floor on their stomachs

63  
00:02:27,750 --> 00:02:25,680

called the prone position and to get up

64

00:02:29,350 --> 00:02:27,760

from that position as quickly as they

65

00:02:31,350 --> 00:02:29,360

can stand

66

00:02:33,670 --> 00:02:31,360

for three and a half minutes

67

00:02:36,550 --> 00:02:33,680

where we can get cardiovascular measures

68

00:02:39,030 --> 00:02:36,560

as well as look at their sway from a

69

00:02:41,190 --> 00:02:39,040

postural standpoint

70

00:02:42,710 --> 00:02:41,200

and then we do

71

00:02:44,790 --> 00:02:42,720

a test called

72

00:02:47,350 --> 00:02:44,800

the tandem walk which most people are

73

00:02:49,430 --> 00:02:47,360

familiar with in terms of

74

00:02:51,589 --> 00:02:49,440

of drunk driving when they see people on

75

00:02:55,030 --> 00:02:51,599

the side of the road trying to walk

76

00:02:57,750 --> 00:02:55,040

placing one foot in front of the other

77

00:03:00,229 --> 00:02:57,760

is it exciting to you

78

00:03:02,309 --> 00:03:00,239

to see what's going to happen

79

00:03:04,790 --> 00:03:02,319

to the vestibular system and all after

80

00:03:07,350 --> 00:03:04,800

one year in space versus six months oh

81

00:03:08,309 --> 00:03:07,360

yeah that's that's our prime objective

82

00:03:09,910 --> 00:03:08,319

is

83

00:03:11,589 --> 00:03:09,920

the one thing we look at

84

00:03:14,309 --> 00:03:11,599

that's particularly important for the

85

00:03:17,589 --> 00:03:14,319

programmatic aspects of this and help us

86

00:03:20,470 --> 00:03:17,599

define the risks that may be involved in

87

00:03:22,550 --> 00:03:20,480

long long duration space flight is

88

00:03:24,710 --> 00:03:22,560

recovery time

89

00:03:26,070 --> 00:03:24,720

and how long does it take you before

90

00:03:28,149 --> 00:03:26,080

you're performing

91

00:03:29,350 --> 00:03:28,159

at the level that you were before you

92

00:03:31,589 --> 00:03:29,360

flew

93

00:03:34,149 --> 00:03:31,599

so do you think scott kelly will do

94

00:03:37,430 --> 00:03:34,159

better than i did in your lab with this

95

00:03:39,270 --> 00:03:37,440

i have no doubt about it

96

00:03:40,630 --> 00:03:39,280

so what do you think scott

97

00:03:42,070 --> 00:03:40,640

he's speechless i don't know we're

98

00:03:44,070 --> 00:03:42,080

having a little fun around work today

99

00:03:45,990 --> 00:03:44,080

welcoming scott home we have a lot of

100

00:03:47,990 --> 00:03:46,000

tour groups who come through here so

101

00:03:49,110 --> 00:03:48,000

everyone's coming in and taking selfies

102

00:03:52,710 --> 00:03:49,120

and then we're going to post them on our